

Claims

What is claimed is:

- [c1] A virtual attribute service in a directory server, comprising:
an attribute value associated with an entry;
a virtual attribute service provider; and
an interface using the virtual attribute service provider to generate the attribute value associated with the entry.
- [c2] The virtual attribute service of claim 1, wherein the attribute value is not physically contained within the entry.
- [c3] The virtual attribute service of claim 1, wherein the virtual attribute service provider comprises a role service.
- [c4] The virtual attribute service of claim 1, wherein the virtual attribute service provider comprises a class of service.
- [c5] The virtual attribute service of claim 1, wherein the virtual attribute service provider is implemented as a plugin to the directory server.
- [c6] A method of generating a value of a virtual attribute, comprising:
calling a virtual attribute service by an executable application; and
consulting a virtual attribute service provider within a common interface of the virtual attribute service;
wherein the value of the virtual attribute is generated by the virtual service provider accessed by the common interface.
- [c7] The method of claim 6, further comprising:
using a memory cache to store the value of the virtual attribute.

- [c8] The method of claim 6, further comprising:
maintaining a count for a number of times a query passes through the common interface; and
flagging an error and aborting the execution of the virtual attribute service if the count exceeds a threshold number.
- [c9] The method of claim 6, further comprising:
checking a configuration change within a service provider against the configuration of all service providers;
determining whether a cycle is created; and
flagging an error and aborting the execution of the virtual attribute service if a cycle is created.
- [c10] The method of claim 6, wherein the virtual attribute service provider comprises a role service.
- [c11] The method of claim 6, wherein the virtual attribute service provider comprises a class of service.
- [c12] The method of claim 6, wherein the virtual attribute service provider is implemented as a plugin to the directory server.
- [c13] A method of generating a value of a virtual attribute, comprising:
calling a virtual attribute service by an executable application;
consulting a virtual attribute service provider within a common interface of the virtual attribute service;
using a memory cache to store the value of the virtual attribute;
maintaining a count for the number of times a query passes through the common interface;

flagging an error and aborting the execution of the virtual attribute service if the count exceeds a threshold number;
checking a configuration change within a service provider against the configuration of all service providers;
determining whether a cycle is created; and
flagging an error and aborting the execution of the virtual attribute service if a cycle is created;
wherein the value of the virtual attribute is generated by the virtual service provider accessed by the common interface.

- [c14] A class of service in a directory server, comprising:
a definition entry identifying a type of class of service; and
a dynamic template entry storing a list of the shared attribute values;
wherein the definition entry and the dynamic template entry interact to provide an attribute value to a target entry.
- [c15] The class of service of claim 14, wherein the definition entry is stored as a subentry in a directory information tree below a branch at which the class of service is effective.
- [c16] The class of service of claim 14, wherein the target entry comprises an entry pointing to the class of service.
- [c17] The class of service of claim 14, wherein changes to the attribute value of the dynamic template entry are applied to all entries sharing the attribute value.

- [c18] A method for generating an attribute value of a class of service in a directory server, comprising:
- identifying a dynamic template entry by a distinguished name;
 - adding a specific attribute to the dynamic template entry; and
 - generating the attribute value of the dynamic template entry while a client application is accessing the directory server.
- [c19] The method of claim 18, wherein the specific attribute is a cosPointerDefinition object class.
- [c20] A method for generating an attribute value of a class of service in a directory server, comprising:
- identifying a dynamic template entry by an attribute value of a target entry;
 - adding a specific attribute to the dynamic template entry; and
 - generating an attribute value of the dynamic template entry while a client application is accessing the directory server.
- [c21] The method of claim 20, wherein the specific attribute is a cosIndirectDefinition object class.
- [c22] A method for generating an attribute value of a class of service in a directory server, comprising:
- identifying a dynamic template entry by a distinguished name and an attribute value of a target entry;
 - adding a specific attribute to the dynamic template entry; and
 - generating an attribute value of the dynamic template entry while a client application is accessing the directory server.
- [c23] The method of claim 22, wherein the specific attribute is a cosClassicDefinition object class.

- [c24] An apparatus for generating a value of a virtual attribute, comprising:
means for calling a virtual attribute service by an executable application; and
means for consulting a virtual attribute service provider within a common
interface of the virtual attribute service;
wherein the value of the virtual attribute is generated by the virtual service
provider accessed by the common interface.